PTO/SB/08A (10-96)
Approved for use through 10/31/99. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE Inder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(uco ac many sheets as necessary)

Sheet	1	of	5

Complete if Known					
Application Number	09/767370				
Filing Date	01/23/2001				
First Named Inventor	Browning, Jeffr				
Group Art Unit	1642				
Examiner Name	A. Holleran				
Attorney Docket Number	A054 US				

				U.S. PATENT DOCU	IMENTO	
		II S Paton	it Document	U.S. PATENT DUCU		
Examiner Initials*	Cite No. <sup>1</sup>	Number	Kind Code <sup>2</sup> (If known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
CY	AA	5,605,6	90		2/25/97	8
				<del>-</del>		·
				*		
					<del>                                     </del>	
				···.		
	-					
					<del></del>	
				<del></del>		
-	-			·		
			. 1 1		1	

				FORI	EIGN PATENT DOCUMENTS	S		
Examiner Initials*	Cite No.1	Office <sup>3</sup>	Foreign Patent Docum  Number4	ent Kind Code <sup>5</sup> (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant	Т6
CY	ВА		WO 99/53059			10/21/99	Figures Appear	+
CY	ВВ		WO 98/17313			4/30/98		1
CY	вс		WO 97/04658			2/13/97		
CY	BD		EP 0 496 973 A	2		8/5/92		
	BE		EP 0 608 532 A	2		8/3/94		
								+
	_	<del>  -</del>						$\bot$

Examiner Signature	Chrys	ph HYE	Date Considered	7-29-02
3.3			Oorisidered	

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>8</sup> Applicant is to place a check mark here if English language Translation is attached.

Please type a plus sign (+) inside this box

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Inder the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

ubstitute for form 1449B/PTO

Sheet

& TRADEMA

FORMATION DISCLOSURE **STATEMENT BY APPLICANT** 

(use as many sheets as necessary)

of

Compl t if Known Application Number 09/767370 **Filing Date** 01/23/2001 First Named Inventor Browning, Jeffrey Group Art Unit 1642 **Examiner Name** A. Holleran Attorney Docket Number A054 US

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	-2
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
cx	CA	Aggarwal et al., 1996, Eur. Cytokine Netw., 7:93-124, "Tumor necrosis factors: Developments during the last decade"	
CY	СВ	Alderson, Mark R., 1994, Eur. J. Immunol., 24:2219-2227, "Molecular and biological characterization of human 4-1BB and its ligand"	
cy	cc	Ashkenazi, Avi et al., 1991, Proc. Natl. Acad. Sci., 88:10535-10539, "Protection against endotoxic shock by a tumor necrosis factor receptor immunoadhesin"	
cγ	Э	Banner, David W. et al., 1993, Cell, 73:431-445, "Crystal Structure of the Soluble Human 55 kd TNF Receptor-Human TNFbeta Complex: Implications for TNF Receptor Activation"	
CY	CE	Baum, Peter et al., 1994, The EMBO Journal, 13:3992-4001, "Molecular characterization of murine and human OX40/OX40 ligand systems: identification of a human OX40 ligand as the HTLV-1 regulated protein gp34"	
CY	CF	Flier, Jeffrey S., et al., 1996, The New England Journal of Medicine, 334:1717-1725, "THE TUMOR NECROSIS FACTOR LIGAND AND RECEPTOR FAMILIES"	
сү	૮૬	Browning et al., 1995, The J. of Immunology, 154:33-46, "Characterization of Surface Lymphotoxin Forms Use of Specific Monoclonal Antibodies and Soluble Receptors"	
cy	СН	Browning et al., 1996, The J. of Biological Chemistry, 271:8618-8626, "Preparation and Characterization of Soluble Recombinant Heterotrimeric Complexes of Human Lymphotoxins alpha and beta*"	
CY	CI	Browning et al., 1996, J. Exp. Med., 183:867-878, "Signaling through the Lymphotoxin Beta Receptor Induces the Death of Some Adenocarcinoma Tumor Lines"	
сy	сJ	Bucay et al., 1998, Genes and Development, 12:1260-1268, "osteoprotegerin-deficient mice develop early onset osteoporosis and arterial calcification"	
cy	cĸ	Chaplin et al., 1998, Current Opinion in Immunology, 10:289-297, "Cytokine regulation of secondary lymphoid organ development"	

Signature   Considered   1-24-02	Examiner Signature	Christop HYC	Date Considered	7-79-02
----------------------------------	-----------------------	--------------	--------------------	---------

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08B (10-96)

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Sheet

Substitute for form 1449B/PTO

## **INFORMATION DISCLOSURE** STATEMENT BY APPLICANT

(uŝe as many sineets as necessary) of 3

Сотр	ol t if Known	田
Application Number	09/767370	王
Filing Date	01/23/2001	H
First Named Inventor	Browning, Jeffrey	3
Group Art Unit	1642	LLI
Examiner Name	A. Holleran	
Attorney Docket Number	A054 US	8

<del></del>		OTHER BRIOD ART. MON BATENT LITERATURE DOCUMENTS	爱
Examiner Initials*	Cite No.1	OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS  Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
сY	CL	Chicheportiche et al., 1997, J. of Biological Chemistry, 272:32401-32410, "TWEAK, a New Secreted Ligand in the Tumor Necrosis Factor Family That Weakly Induces Apoptosis*"	
сУ	CM	Corcoran et al., 1994, Eur. J. Biochem., 223:831-840, "Characterization of ligand binding by the human p55 tumour-necrosis-factor receptor"	
ey	CN	Crowe et al., 1994, Science, 264:707-710, "A Lymphotoxin-beta-Specific Receptor"	
CY	co	Degli-Esposti et al., 1997, J. of Immunology, 158:1756-1762, "Activiation of the Lymphotoxin Beta Receptor by Cross-Linking Induces Chemokine Production and growth arrest in A375 melanoma cells"	
CY	СР	Eason et al., 1996, Transplantation, 61:224-228, "EVALUATION OF RECOMBINANT HUMAN SOLUBLE DIMERIC TUMOR NECROSIS FACTOR RECEPTOR FOR PREVENTION OF OKT3-ASSOCIATED ACUTE CLINICAL SYNDROME"	
CY	CQ	Eggermont et al., 1996, J. of Clinical Oncology, 14:2653-2665, "Isolated Limb Prefusion With High-Dose Tumor Necrosis Factor-alpha in Combination With Interferon-γ and Melphalan for Nonresectable Extremily Soft Tissue Sarcomas: A Multicenter Trial"	
сү	CK	Fanslow et al., 1992, J. of Immunology, 149:655-660, "SOLUBLE FORMS OF CD40 INHIBIT BIOLOGIC RESPONSES OF HUMAN B CELLS"	
CY	دع	Feldman et al., 1997, Advances in Immunology, 64:283-350, "Anti-Tumor Necrosis Factor-alpha Therapy of Rheumatoid Arthritis"	
CY	ст	Goodwin et al., 1993, Cell, 73:447-456, "Molecular and Biological Characterization of a Ligand for CD27 Defines a New Family of Cytokines with Homology to Tumor Necrosis Factor"	
cy	сu	Green et al., 1997, Proc. Natl. Acad. Sci., 94:5986-5990, "Fas-ligand: Privilege and peril"	
сÀ	CY	Harrop et al., 1998, J. of Biological Chemistry, 273:27548-27556, "Herpesvirus Entry Mediator Ligand (HVEM-L), a Novel Ligand for HVEM/TR2, Stimulates Proliferation of T Cells and Inhibits HT29 Cell Growth*"	

Examiner Signature	Christph HYan	Date Considered	7-29-02

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.

PTO/SB/08B (10-96)

Approved for use through 10/31/99. OMB 0651-0031

Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

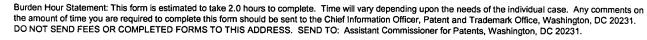
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Complete if Known نی Substitute for form 1449B/PTO **Application Number** 09/767370 STATEMENT BY APPLICANT 01/23/2001 Filing Date **First Named Inventor** Browning, Jeffrey Group Art Unit 1642 Examiner Name (use as many sheets as necessary) A. Holleran of 5 Attomey Docket Number A054 US g

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	}
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
CY	Cw	Hudee et al., 1999, Gene Therapy, 6:939-943, "Activated polyamidoamine dendrimers, a non-viral vector for gene transfer to the corneal endothelium"	
CY	CX	Mackay et al., 1998, Gastroenterology, 115:1464-1475, "Both the Lymphotoxin and Tumor Necrosis Factor Pathways Are Involved in Experimental Murine Models of Colitis"	
cY	СУ	Mackay et al., 1998, Nature, 395:26-27, "Turning off follicular dendritic cells"	
CY	(2	Mackay et al., 1997, Eur. J. Immunol., 27:2033-2042, "Lymphotoxin but not tumor necrosis factor functions to maintain splenic architecture and humoral responsiveness in adult mice"	
cγ	CCA	Marsters et al., 1992, The J. of Biological Chem., 267:5747-5750, "Identification of Cysteine-rich Domains of the Type 1 Tumor Necrosis Factor Receptor Involved in Ligand Binding*"	
cy	CCB	Mauri et al., 1998, Immunity, 8:21-30, "LIGHT, a New Member of the TNF Superfamily, and Lymphotoxin alpha Are Ligands for Herpesvirus Entry Mediator"	
CY	ατ	Mohler et al., 1993, J. of Immunology, 151:1548-1561, "Soluble Tumor Necrosis Factor (TNF) Receptors Are Effective Therapeutic Agents in Lethal Endotoxemia and Function Simultaneously as Both TNF Carriers and TNF Antagonists"	
cY	دده	Naismith et al. 1996, J. of Molecular Recognition, 9:113-117, "Seeing Double: Crystal Structures of the Type I TNF Receptor"	
cy	CCE	Rennert et al. 1996, J. Exp. Med., 184:1999-2006, "Surface Lymphotoxin alpha/Beta Complex Is Required for the Development of Peripheral Lymphoid Organs"	
cy	СЕF	Rennert et al., 1997, International Immunology, 9:1627-1639, "Selective disruption of lymphotoxin ligands reveals a novel set of mucosal lymph nodes and unique effects of lymph node cellular organization"	
CY	æ	Rudikoff et al., 1986, Proc. Natl. Acad. Sci., 83:7875-7878, "Functional antibody lacking a variable-region disulfice bridge"	

Examiner Signature Christph H/2	Date Considered	7-29-02
---------------------------------	--------------------	---------

<sup>&</sup>lt;sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.





<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

C mpl te if Known Substitute for form 1449B/PTO **Application Number** 09/767370 NFORMATION DISCLOSURE STATEMENT BY APPLICANT Filing Date 01/23/2001 First Named Inventor Browning, Jeffrey Group Art Unit 1642.1 (use as many sineets as necessary) **Examiner Name** A. Holleran of Attorney Docket Number Sheet A054 US

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	220
Examiner Initials*	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
сү	ССН	Simonet et al., 1997, Cell, 89:309-319, "Osteoprotegerin: A Novel Secreted Protein Involved in the Regulation of Bone Density"	
CY	ŒI	Smith et al., 1994, Cell, 76:959-962, "The TNF Receptor Superfamily of Cellular and Viral Proteins: Activation, Costimulation, and Death"	
CY	CCJ	Smith et al., 1993, Cell, 73:1349-1360, "CD30 Antigen, a Marker for Hodkin's Lymphoma, Is a Receptor Whose Ligand Defines an Emerging Family of Cytokies with Homology to TNF"	T
CY	ακ	Suda et al., 1993, Cell, 75:1169-1178, "Molecular Cloning and Expression of the Fas Ligand, a Novel Member of the Tumor Necrosis Factor Family"	
eY	ŒL	Van Dullemen et al., 1995, Gastroenterology, 109:129-135, "Treatment of Crohn's Disease With Anti-Tumor Necrosis Factor Chimeric Monoclonal Antibody (cA2)"	
ey	CM	Ware et al., 1995, Current Topics in Microbiology and Immunology, 198:175-218, "The Ligands and receptors of the Lymphotoxin System"	
cY	ccN	Williams et al., 1995, Immunology, 84:433-439, "Successful therapy of collagen-induced arthritis with TNF receptor-IgG fusion protein and combination with anti-CD4"	
cY	cco	Loetscher, Hansruedi et al., 1991, J. of Biological Chemistry, 266:18324-18329, "Recombinant 55-kDa Tumor Necrosis Factor (TNF) Receptor"	
Ćγ	æ	Weickert et al., 1997, Applied and Environmental Microbiology, 63:4313-4320, "Stabilization of Apoglobin by Low Temperature Increases Yield of Soluble Recombinant Hemoglobin in Escherichia coli"	
			$\downarrow$

Examiner Signature Chrus Toh HYC	Date 7-29-02	
----------------------------------	--------------	--

<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

<sup>1</sup> Unique citation designation number. 2 Applicant is to place a check mark here if English language Translation is attached.